

**BY ORDER OF THE COMMANDER
DOVER AIR FORCE BASE**

**DOVER AIR FORCE BASE INSTRUCTION
11-204**



4 DECEMBER 2013

Flying Operations

**AIRCRAFT WEIGHT AND
BALANCE PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Dover Air Force Base Instruction (DAFBI), 11-204, Aircraft Weight and Balance Program:

Developed to outline procedures and responsibilities for control and management of the Aircraft Weight and Balance Program for all C-5 and C-17 aircraft assigned to the 436 Airlift Wing, Dover AFB, Delaware. This guidance is applicable to the 436th Aircraft Maintenance Squadron (AMXS), 736th Aircraft Maintenance Squadron (AMXS), 436th Maintenance Squadron (MXS), Plans, Scheduling and Documentation (PS&D), Maintenance Group Quality Assurance Office (QA), 436th Aerial Port Squadron (APS), 436th Operation Support Squadron (OSS), 3d Airlift Squadron (AS), 9th Airlift Squadron (AS), 326th Airlift Squadron (AS), and 709th Airlift Squadron (AS) Loadmasters. This operating instruction was developed in conjunction with guidance from AFI21-101_AMCSUP_I, Chapter 8. All weight and balance procedures are outlined in the referenced technical orders below. This operating instruction will be used in conjunction with these technical orders. This is a joint publication between the 436th and 512th Airlift Wings. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, Recommendation for Change of Publication; route AF Form 847s from the field through the appropriate functional's chain of command.

SUMMARY OF CHANGES

This revision includes the addition of C-17 aircraft assigned to Dover AFB. This version also removes the requirement for QA to provide and maintain sample (canned Form F) DD Form 365-4's and to recertify the DD Form 365-3 (Chart C) every 180 days and the requirement for QA to complete the obsolete W&B Airlift CBT. The squadron titled Equipment Maintenance Squadron (EMS) has been updated to reflect Maintenance Squadron (MXS). This version also clarifies the duties of AMXS for supplemental books and updates the requirements listed in Attachment 2 for C-5 PDM input.

1. Quality Assurance (QA).

1.1. The QA Office will manage and be responsible for the Weight and Balance Program for all C-5/C-17 aircraft assigned to the 436th Airlift Wing, Dover AFB, DE.

1.2. QA will select individuals to be Weight and Balance Program Managers (to be approved by the MXG/CC) who will ensure the following:

1.2.1. Sufficient personnel have completed W&B General CBT and are trained/certified weight and balance technicians. They must also be signed off in TBA and tracked on the special certification roster.

1.2.2. Weight and balance inventories are completed prior to first flight IAW applicable directives upon return to home station from any ALC or contractor facility where extensive maintenance was performed.

1.2.3. The primary weight and balance handbooks will be maintained in the weight and balance office.

1.2.4. Coordinate all arrangements for acquiring aircraft scales and qualified (certified) personnel for an aircraft that requires weighing at home station.

1.2.5. Track all accomplished aircraft TCTOs and modifications that are determined to affect the basic weight and moment. This will be accomplished by developing a spreadsheet to ensure weight and balance records are properly documented for all aircraft.

1.2.6. Weight and Balance qualified personnel will post and maintain a certified copy of the current (last page) DD Form 365-3 (Chart C) for each assigned aircraft in the applicable aircraft supplemental handbook.

1.2.7. Provide 436 OG/OGV with a certified copy of the most current DD Form 365-3 (Chart C) for all assigned aircraft. Email Chart C to 436OGOGV@us.af.mil.

1.3. QA TODO (Technical Order Distribution Officer) will ensure that the Weight and Balance Program Manager receives a copy of all TCTOs within 24 hours of receipt.

2. Plans, Scheduling, and Documentation (PS&D).

2.1. PS&D will inform and provide the QA TODO of any TCTO changes that affect weight and balance of assigned aircraft. This information will include, but is not limited to, a copy of the TCTO, the time, date, and location of the initial TCTO briefing.

2.2. PS&D will inform the Weight and Balance Program Manager when any assigned aircraft is scheduled for: Global Reach Improvement Program (GRIP), return, Programmed Depot Maintenance (PDM) Input, PDM return, and aircraft transfers, in or out, of Dover AFB. This notification is to take place no later than five days prior to any anticipated aircraft movement.

3. 436/736 Aircraft Maintenance Squadrons (AMXS).

3.1. The AMXS Debrief Element will inform QA if weight and balance discrepancies are discovered during the debriefing of any C-5/C-17 aircraft assigned to or transiting Dover AFB.

3.2. AMXS will prepare the aircraft if weighing is required. Preparation will include, but is not limited to, defueling, servicing of LOX and hydraulic systems, and towing the aircraft to an approved hangar. AMXS will also provide at least one crew chief at the aircraft to assist during the C-5/C-17 weighing process.

3.3. AMXS will coordinate aircraft configuration between APS, AMXS (AMES shop), and QA for the equipment that will be removed/installed for Depot input/returns.

3.4. AMXS will immediately inform a QA Weight and Balance Technician when a PDM input aircraft has completed its equipment removal prior to departure. This will allow an accurate aircraft equipment inventory update, and weight and balance recertification. Aircraft configuration will be completed 24 hours prior to scheduled departure. The PDM input will be complied with by using the locally developed checklist (see attachment 2).

3.5. AMXS will complete the entire equipment reconfiguration of a PDM return at least 24 hours before the aircraft's next flight. Immediately after the post PDM reconfiguration, AMXS will inform a QA Weight and Balance Technician. This will allow an accurate and complete aircraft inventory update and weight and balance recertification by QA prior to the next flight.

3.6. Configuration/reconfiguration is considered complete when all aircraft slides, rafts, troop compartment seats, dash 21 equipment, and required chains, devices, and straps are returned/removed as required.

3.7. The Aircraft Expediter or Production Superintendent is responsible for informing a QA Weight and Balance Technician of any circumstance in which the aircraft's weight and balance could be affected prior to a scheduled flight. An example of this would be removal of the forward ramp extension for repairs, and the aircraft is required to fly prior to reinstallation.

3.8. C-5 Weight and Balance supplemental handbook will be located in all assigned aircraft in the slot beneath the relief crew table. C-17 Weight and Balance supplemental handbook will be located in all assigned aircraft in the Weight and Balance book compartment aft of the forward emergency exit.

3.8.1. AMXS TODO will maintain and update the technical orders and binders associated with the aircraft weight and balance supplemental handbook stored on each aircraft.

3.9. AMXS will procure and install DD Forms 365-4, (Form F blanks) on all C-17 aircraft (maintain sufficient amount to accomplish mission).

3.10. AMXS will provide a fully qualified C-17 jacking team in the event a C-17 aircraft requires weighing (as required).

4. Maintenance Squadron (MXS).

4.1. MXS will assist QA if weighing of a C-5 aircraft becomes necessary.

4.1.1. Repair and Reclamation (R/R) shop will provide a fully qualified C-5 jacking team in the event a C-5 aircraft requires weighing. MXS will be notified as soon as possible if weighing of an aircraft is required.

5. Aerial Port Squadron (APS).

5.1. APS will configure the aircraft for PDM input no later than 24 hours prior to aircraft scheduled departure time.

5.1.1. C-5 items will be removed, stowed, stored, serviced, or deserviced IAW [Attachment 2](#).

5.2. APS will reconfigure, reinstall, and service all items removed IAW [Attachment 2](#) for C-5 PDM return aircraft no later than 24 hours prior to the first flight after return.

6. Operations Support Squadron (OSS).

6.1. Life Support will remove the aircrew body armor container 24 hours prior to aircraft scheduled departure for PDM and will ensure proper build-up of each aircraft upon return from PDM.

7. 326th, 709th, 9th, and 3d Airlift Squadron (AS) Loadmasters.

7.1. Loadmasters will maintain the supplemental handbook in an operable and clean condition. Inspect each handbook and, if in need of repair or revision, enter appropriate discrepancy in aircraft forms.

7.2. Preparation of the DD Form 365-4 (Form F), is primarily a loadmaster responsibility. C-5 Loadmasters will ensure adequate supplies of DD Forms 365-4, are kept in each handbook.

RICHARD G. MOORE JR., Col, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

T.O. 1-1B-50, *Weight and Balance*, 1 APR 08

AFI 11-2C-5, V 3, *C-5 Operations Procedures*, 8 AUG 11

AFI 11-2C-5, V 3, Addenda A, *C-5 Aircraft Configuration and Mission Planning*, 1 NOV 11

AFI 11-301, V 2, *Maintenance and Configuration Requirements for Mobility Air Forces (MAF) Aircrew and Aircraft Installed Life Support Equipment (ALSE)*, *Certified Current* 30 OCT 09

AFI 11-2C-17, VOL 3, *C-17 Operations Procedures*, 15 DEC 05

AFI 21-101, *Aerospace Equipment Maintenance Management*, 26 JUL 10

AFI 21-101_AMCSUP_I, *Aerospace Equipment Maintenance Management*, 14 FEB 11

Adopted Forms

DD Form 365-3 (Chart C), *Basic Weight and Balance Record*

DD Form 365-4 (Form F), *Weight and Balance Clearance Form*

Abbreviations and Acronyms

ALC—Air Logistics Center

AMXS—Aircraft Maintenance Squadron

APS—Aerial Port Squadron

A/R—Aero Repair

AS—Airlift Squadron

CBT—Computer Based Training

CWS—Contract Work Specification

EMS—Equipment Maintenance Squadron

OSS—Operations Support Squadron

PDM—Programmed Depot Maintenance

PS&D—Plans, Scheduling and Documentation

QA—Quality Assurance

TBA—Training Business Area

TCTO—Time Compliance Technical Order

TODO—Technical Order Distribution Office

Terms

Weight and Balance Program Manager— Person who has the responsibility to ensure the weight and balance work is complete and correct.

Weight and Balance Technician— Qualified person assigned to weight and balance work.

Attachment 2**C-5 PROGRAMMED DEPOT MAINTENANCE INPUT EQUIPMENT CHECKLIST**

A2.1. This checklist was developed for, and applies to, the 436th/512th Aircraft Maintenance Squadron.

A2.2. The following criteria must be complied with as noted in this checklist during the pre-depot period prior to aircraft PDM departure. When all checklist items are completed, Raptor 2 will notify MXG/QA so the aircraft's weight and balance data can be adjusted. All equipment removed will be reflected in the AF Form 2692, Aircraft/Missile Equipment Transfer/Shipping Listing, as applicable. MXG/QA will be responsible for clearing the AFTO 781A, Maintenance Discrepancy and Work Document, entry for the required inventory and recertification. Accomplishment of this checklist will take place NO LATER than 24 hours prior to the aircraft's PDM departure. References: AFI 11-301 Vol. 2 and Contract Work Specification (CWS) RFP No. F41608-96-R-0254

A2.3. The following items will be removed for PDM input:

Figure A2.1. The following items will be removed for PDM input

FLIGHT STATION

- ☐ INSTRUCTOR ENGINEERS SEAT
- ☐ INSTRUCTOR NAVIGATORS SEAT
- ☐ FLIGHT STATION ARMOR
- ☐ ALL CHECKLISTS
- ☐ FIRST AID KITS-ALL BUT 2 EA

CRYPTO CONTROLLED INVENTORY (CCI) ITEMS

- ☐ ALE-47 PROGRAMMER (FE)
- ☐ ALE-47 PISTOL GRIPS 3 EA (FE,7L,7R)
- ☐ ALE-47 SAFETY PINS 6 EA

RELIEF CREW COMPARTMENT

- ☐ FIRST AID KITS
- ☐ GALLEY OVEN
- ☐ HOT PLATE
- ☐ REFRIGERATOR
- ☐ CREW LIFE RAFT
- ☐ BUNK MATTRESSES
- ☐ JOB GUIDES
- ☐ SPARE AIRCRAFT PARTS

- ☐ COFFEE POT
- ☐ FOOD TRAYS
- ☐ TECH ORDERS

COURIER COMPARTMENT

- ☐ SEATS
- ☐ FIRST AID KITS
- ☐ TRASH CANS
- ☐ AIRCREW BODY ARMOR CONTAINER

CARGO COMPARTMENT

- ☐ WINCHES
- ☐ WINCH PENDANTS
- ☐ SHORT SCANNERS CORDS
- ☐ FIRST AID KITS-ALL BUT 2 EA
- ☐ ALL CHAINS (EXCEPT THOSE REQUIRED IN PARA A2.4) (APS)
- ☐ ALL CARGO STRAPS (EXCEPT THOSE REQUIRED IN PARA A2.4) (APS)
- ☐ ALL DEVICES (EXCEPT THOSE REQUIRED IN PARA A2.4) (APS)
- ☐ UTILITY LADDER
- ☐ TACKLE BLOCK (3 EA)
- ☐ HYDRAULIC FLUID-ALL BUT 1 EA CASE
- ☐ ENGINE OIL-ALL BUT 1 EA CASE
- ☐ 7L & 7R ARMOR
- ☐ LOX COMPARTMENT ARMOR (EXCEPT 2 EA BASE PLATES)

TROOP COMPARTMENT

- ☐ SEATS
- ☐ ESCAPE SLIDES
- ☐ REFRIGERATORS
- ☐ ESCAPE SLIDE RESEVOIRS
- ☐ FIRST AID KITS
- ☐ LIFE RAFTS
- ☐ OVENS
- ☐ LOADMASTER PAX SERVICE KIT
- ☐ TRASH CANS

- ☐ FOOD TRAYS

A2.4. The following items will be serviced, deserviced, and/or stowed for PDM input:

Figure A2.2. The following items will be serviced, deserviced, and/or stowed for PDM input

FLIGHT STATION

- ☐ FIRE FIGHTING GLOVES (STOWED BUNK ROOM)
- ☐ AIRCREW SAFETY HARNESS (STOWED BUNK ROOM)
- ☐ T.O. 1C-5A-102-(1) (STOWED FE T.O. CABINET)

CRYPTO CONTROLLED INVENTORY (CCI) ITEMS

- ☐ MASTER SAFETY PIN (INSTALLED FE CB PNL #1)

RELIEF CREW COMPARTMENT

- ☐ CREW LATRINE (SERVICED) (FLEET)
- ☐ RESTRAINT GATE #5 DOOR (STOWED)
- ☐ CREW LIFE RAFT EJECTION BOTTLE (DESERVICED)

COURIER COMPARTMENT

- ☐ POTABLE WATER SYSTEM (DESERVICED) (FLEET)

CARGO COMPARTMENT

- ☐ ENGINE INLET COVERS 4 EA (STOWED)
- ☐ PITOT COVERS 4 EA (STOWED)
- ☐ ANTENNA STREAMERS (STOWED)
- ☐ MLG TOW RING ADAPTERS (STOWED LEFT F.S. 694)
- ☐ KNEELING COLLARS (STOWED LEFT F.S. 694)
- ☐ KNEEL PAD EXTEND PIN (STOWED LEFT F.S. 630)
- ☐ STRUT LIMITER (STOWED LEFT F.S. 694)
- ☐ MLG DOWNLOCK PINS (STOWED LEFT F.S. 630)
- ☐ WING JACK PAD ADAPTERS & BOLTS (STOWED RIGHT F.S. 480)
- ☐ PALLET STOPS 4 EA (STOWED 2 EA LEFT F.S. 1780 & 2 EA RIGHT F.S. 1780)
- ☐ FWD RAMP "A" FRAME (STOWED)
- ☐ AFT RAMP "A" FRAME (STOWED)
- ☐ 25K POUND CHAINS 10 EA (STOWED LEFT F.S. 794) (APS)

- ☐ 25K POUND DEVICES 10 EA (STOWED 4 EA LEFT F.S. 674 & 714, 2 EA LEFT F.S. 754) (APS)
- ☐ 10K POUND CHAINS 10 EA (STOWED RIGHT F.S. 794) (APS)
- ☐ 10K POUND DEVICES 10 EA (STOWED 5 EA RIGHT F.S.494 & 594) (APS)
- ☐ CARGO STRAPS 10 EA (STOWED FWD) (APS)
- ☐ AFT PRESS DOOR HINGE ADAPTERS(PORKCHOPS) 2 EA (STOWED RGHT F.S. 1780)
- ☐ FWD RAMP LOCK PINS (INSTALLED)
- ☐ AFT RAMP LOCK PINS (INSTALLED)

TROOP COMPARTMENT

- ☐ LATRINES (DESERVICED) (FLEET)
- ☐ POTABLE WATER SYSTEM (DESERVICED) (FLEET)
- ☐ RESTRAINT GATE #6 SERVICE DOOR (STOWED)
- ☐ PROTECTIVE CLOTHING KIT (STOWED)

A2.5. All deviations from this checklist will be coordinated with the MXG/QA Weight and Balance Program Managers.